solution brief

# Solid State Drives - SATA/PATA

Envoy Data's PC Cards and drives are made for applications requiring high reliability and high tolerance to shock, vibration, humidity, altitude, ESD, and temperature. The rugged industrial design combined with temperature testing and adherence to rigid standards ensures flawless execution in the harshest environments.

**Envoy Data's industrial grade 2.5" solid state drives (SSD's) bring the advantages of non-volatile memory to embedded computing applications. Available with a SATA-II or PATA interface, the SSD's provide low-power, high reliability solid state storage in a 2.5" form factor and can be used as a direct replacement for a hard disk drive.**

**Available in capacities ranging from 1GB to 64GB the EDC SSD's typically require less than 1W at all densities. Low power requirements make the SSD's well suited for mobile applications, where power savings can result in longer battery life. In fixed applications, lower power dissipation can also reduce the need and cost of cooling in blade server or server environments.**

**The SSD's are designed for use in embedded applications, such as medical devices, transportation systems, ruggedized mobile computing, and as the operating system boot drive in a wide range of embedded applications.**

**By using only single-level cell (SLC) NAND flash technology, the industrial grade SSD's offer higher performance and increased reliability over other technologies. The SSD's come with a 3-year limited warranty.**

| Product | Capacity (GB) | Performance (Sustained) |
|---|---|---|
| 2.5" SATA-II | 4, 8, 16, 32, 64 | 72 MB/s Read<br>55 MB/s Write |
| 2.5" PATA | 1, 2, 4, 8, 16, 32, 64 | 40 MB/s Read<br>23 MB/s Write |

- **Typically Requires less than 1W active power at all densities.**
- **Available in industrial (-40° to 85°C) operating temperate range.**
- **Advanced flash management for enhanced reliability.**

ENVOY DATA CORPORATION

Contact us today to speak with an IT Specialist
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www.envoydata.com

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| | 2.5" SATA-II | 2.5" PATA |
|---|---|---|
| **Physical** | | |
| Form Factor | 2.5" | 2.5" |
| Length (mm) | 101.9 | 100.3 |
| Width (mm) | 69.85 | 69.9 |
| Height (mm) | 9.5 | 6.1 |
| Connector | 3GB/s SATA-II | 44-pin PATA |

1 – Based on the RDF2000 UTE C80-810 Telecom Standard at 25°C
2 – Based on 64GB Drive
3 – Based on MIL-STD-810
4 – Based on 32GB Drive

| | 2.5" SATA-II | 2.5" PATA |
|---|---|---|
| **Performance** | | |
| Burst (MB/s) | 300 | 100 |
| Sustained (MB/s) | Up to 72/55 MB/s R/W | Up to 40/23 MB/s R/W |
| **Capacity** | | |
| Minimum | 4GB | 1GB |
| Maximum | 400GB | 64GB |
| **Reliability** | | |
| MTBF | 1,550,960 hours 1,2 | >1,900,000 hours 1,2 |
| Data Reliability | 1 in 10 bits read 3,4 | 1 in 10 bits read 3,4 |
| Data Retention | 10 years @ 25°C | 10 years @ 25°C |
| Endurance | >260 years @ 2,000 GB/day write cycles, unlimited reads 2 | |
| **Power** | | |
| Input Voltage | 5V +/- 5% | 5V +/- 5% |
| Idle (Typ) | 0.52W | <0.05W |
| Operational (Typ) | 0.945W Read<br>0.955W Write | <0.75W Read<br><0.75W Write |
| **Environmental** | | |
| Operating Temperature | Commercial: 0° to 70°C<br>Industrial: -40° to 85°C | |
| Operating Shock 3 | 50g half-sine, 11mses, 3 shocks along each axis, X,Y,Z in each direction | |
| Vibration 3 | 16.4g rms, 10-2000Hz, 3-axes | |
| Altitude 3 | 80,000 (24,384M) | 80,000 (24,384M) |
| Relative Humidity 3 | 5% to 95% non-condensing, RH | |
| Conformal Cooling | N/A | N/A |
| Storage Temperature | -55° to 95°C | -55° to 95°C |

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